

introduced a new ground of rejection that that was neither necessitated by the applicant's amendment of the claims, nor based on information submitted in an Information Disclosure Statement. Thus, according to MPEP 706.07(a), the issuance of a Final Office Action (paper 8) is improper.

The Applicant respectfully requests that the finality of the last Office Action be withdrawn.

2. § 112 Rejections

The Examiner has rejected claims 1-28 under 35 U.S.C. § 112, first paragraph, as containing subject matter that was not contained in the specification in such a way as to reasonably convey to one skilled in the art that the inventors, at the time the specification was filed, had possession of the claimed subject matter. The Examiner also has rejected claims 1-28 under 35 U.S.C. § 112, first paragraph, as containing subject matter that was not described in the specification in such a way as to enable one of ordinary skill in the art to which it pertains to make and/or use the invention.

In particular, the Examiner asserts: (1) that the claimed limitation "...the call setup request identifies the destination user agent," as recited in the claims, lacks adequate written description and is not enabled; and, (2) that the claimed limitation "ingress gateways," as recited in the claims, and the manner in which they are used, lacks adequate written description and is not enabled.

MPEP 2163 states that typically, the issue of adequate written description arises "in the context of determining whether new or amended claims are supported by the description of the invention in the application as filed...there is a strong presumption that an adequate written description of the claimed invention is present when the application is filed." MPEP 2163.01 states: "a written description requirement issue generally involves the question of whether the subject matter of a claim is supported by the disclosure of the application as filed."

MPEP 2164.01 provides the Test for Enablement. The test is "whether one reasonably skilled in the art could make or use the invention from the disclosure in the patent coupled with information known in the art without undue experimentation. A patent need not teach, and preferably omits, what is well known in the art."

In the instant application, the term "ingress gateway" is clearly supported by the specification as filed. This term is defined on page 1 of the specification as "a gateway connecting a IP network to a PSTN, PBX, or other network." The term "gateway" is also enabled because it is a well known term of art that anyone of ordinary skill in the art will recognize and understand. It is rather shocking to have the Patent Office maintain that the term gateway is unknown or something new. A gateway is a standard element in the Internet. The Internet has been around since the 1960's. As evidence of this, the Applicant performed a search of the terms "network" and "gateway" on the search engine "Google" and obtained 525,000 hits. One hit (www.dwarfnetwork.com) defined the term as referring to a device that converts IP network protocol into the protocol of another non-IP network. The Networking.com site refers to a gateway as device that acts as an entrance to another network. This site gives the example of a server in an enterprise network such as a LAN. In light of the foregoing, the term "gateway" is both enabled and adequately described because it is a term of art known by those of ordinary skill in the art.

The Examiner also asserted that the claim limitation "...the call setup request identifies the destination user agent" as recited in claim 1, claim 16 and claim 19 lacks adequate written description. Support for this limitation is found on page 12. Page 12 explains that a SUA 102 initiates a call attempt by sending a session participation request (i.e., an INVITE request) to the SPS 106. Table I identifies the contents of the INVITE request. Specifically, the "To" parameter "contains the address of the recipient of the request." Applicant reminds the Examiner that the context of the instant patent application (See Figure 1) is the establishment of a session between a SUA and a DUA. Thus, it is clear that the "recipient of the request" refers to a DUA. Thus, the claimed limitation is adequately supported by the specification. The claimed limitation is also enabled. There is no experimentation involved in sending and receiving a "call setup request that identifies the destination user agent" because Table I explicitly discloses the message format of the INVITE request. The examiner does not explain why this would pose a problem for a programmer to modify SIP programming to accommodate the disclosed message format. Adding a data field in a message format is routine.

For the above reasons, the applicant believes that claims 1-28 are patentable under 35 U.S.C. § 112, paragraph one. The applicant respectfully requests that the rejection of claims 1-28 under 35 U.S.C. § 112, paragraph one, be withdrawn.

3. § 103 Rejections

A. The Examiner has rejected claims 1-15 and 19-22 under 35 U.S.C. § 103(a) as being unpatentable for obviousness over Schultzrinne, A comprehensive multimedia control architecture for the Internet, 1997 IEEE, page 65-76 (hereinafter Schultzrinne) in view of Regnier et al., U.S. Patent No. 5,930,348 (hereinafter Regnier) and Patel et al., U.S. Patent No. 5,883,894 (hereinafter Patel). The rejection is respectfully traversed. The applicant believes that this rejection is improper because the Examiner has failed to make a prima facie case of obviousness.

Amended independent claim 1 of the present invention is directed to a method for routing calls to a destination gateway to thereby establish a communication session call in a telecommunications network between a source user agent and a destination user agent over a path supported at least in part by a telephone network and an IP network. The IP network includes a plurality of ingress and destination gateways, at least one proxy server, and at least one redirect server. As defined in the specification, a gateway is an interface that connects an internet protocol (IP) network to a PSTN, PBX, or some other type of network. The method includes the step of receiving a call setup request at the at least one proxy server from the source user agent. The source user agent is included in a public switched telephone network and the call setup request identifies the destination user agent. The received call setup request is forwarded to the redirect server. Routing information or a request failure response is received. The call setup request is proxied by the at least one proxy server to a destination gateway selected from the routing information, upon receiving the routing information from the redirect server. The selected destination gateway can communicate with a public switched telephone network that includes the destination user agent. The method also includes the step of waiting for a response from the selected destination gateway upon proxying the call setup request to the selected destination gateway. Upon receiving the response from the selected destination gateway within a predetermined time, a communications session is established using the selected destination gateway. If the response is not received within the predetermined time, the call setup request is sent to a succeeding destination gateway selected from the routing information and the failure of the selected destination gateway is reported to the redirect server. The succeeding destination gateway

can communicate with a public switched telephone network that includes the destination user agent.

Amended independent claim 19 of the present invention is directed to a method for detecting an available destination gateway from a plurality of destination gateways in an IP network used for completing a communications session between a source user agent in a public switched telephone network and a destination user agent in a public switched telephone network. The source user agent provides a call setup request that identifies the destination user agent. The method includes the step of transmitting a message to one of the plurality of destination gateways from a server to ascertain an availability status of that particular destination gateway. The one particular destination gateway can communicate with the public switched telephone network that includes the destination user agent. The method also includes the step of waiting for an acknowledge response from the destination gateway for a predetermined period of time. If the acknowledge response is received within a predetermined period of time, it is determined that the destination gateway is available. A message is transmitted to a succeeding gateway of the plurality of gateways. The succeeding gateway can communicate with the public switched telephone network that includes the destination user agent.

Schultzrinne is related to a control architecture for the Internet. The architecture employs two independent but related protocols: the Session Initiation Protocol (SIP), which is used to invite participants to multimedia sessions; and the Real-Time Stream Protocol (RTSP) which is used to control playback and recording for stored continuous media. On page 68, Schultzrinne describes the method for establishing a call over the Internet. The method includes the steps of locating the called terminal, agreeing on the media and the encoding to be used during the call, and determining if the called party desires to be reached. The step of locating the called party includes the step of determining the name of the called party. This method is shown in Figure 1. In this process, the client attempts to contact a SIP server. If that fails, it tries to connect to a SMTP server. If that fails, the call invitation is sent via an e-mail message. If the called party is not at the SIP server named, the SIP server may initiate a redirection response. This is shown in Figure 2. In steps 1-4, the client attempts to call "Henning" via the server named tune.cs.columbia, in the cs.columbia.edu intranet. The server obtains the proper address (hgs@play) from the location server within cs.columbia.edu intranet, and relays it back to the client. Subsequently, the client issues an

invite message to the proper address within the intranet and the call is established. Alternatively, if the intranet is firewalled, the tune.cs.columbia server acts as a proxy, and the call is established with hgs@play via the tune.cs.columbia server. This is shown in Figure 3.

Regnier is related to call routing control in circuit switched networks. As shown in Figure 1, the circuit switched network employs Signaling System No. 7 (SS7), which is commonly used by most PSTNs, including the Regional Bell Operating Companies (RBOCs). SS7 is used to control the service switching points (SSP) that interconnect the trunks (L1-L10) in circuit switched network 10. As shown in Figure 2, Figure 5, and Figure 6, each SSP is connected to a service control point/network (SCP/NP) processor. A SCP/NP is the network resource used to implement the dynamic routing method described by Regnier. In the example provided, a first SSP attempts to establish a call with a neighboring SSP. Unfortunately, the call is unsuccessful because the neighboring SSP has exhausted all of its circuits (see column 8). The first SSP notifies the SCP/NP of the unsuccessful attempt. The SCP/NP identifies the unavailable trunk, updates its database, and finds an alternative route. The SCP/NP transmits a message to the first SSP identifying the alternative route. As an aside, Figure 6 and the associated text discuss a situation wherein facilities in an adjacent "other" network are not available. The "other network" node 26 is operated by a different regional operating company (see column 11, lines 17-20). The other network is a circuit switched network and not an IP network. In this text, the word "gateway" is used to describe SSP 13 and SSP 15 since these circuit switched SSPs link the first circuit switched network to the "other" circuit switched network. These are not gateways as defined in the present invention, i.e., interfaces connecting an Internet Protocol (IP) network to a PSTN.

Patel is related to providing auto-negotiation logic in an interconnection device used to connect different terminals in a LAN. Typically, LAN terminals are designed to support a specific LAN technology. For example, the Ethernet network standard supports various technologies such as the 10 Base-T standard (10 Mb/s CSMA/CD over twisted pair telephone wire), the 10 Base-F standard (10 Mb/s CSMA/CD over optical fiber), the 100 Base-TX standard (100 Mb/s CSMA/CD over two pairs of shielded twisted pairs), and a number of other technologies. The auto-negotiation function is deployed on a shared intermediate LAN device that interconnects a plurality of terminals employing the various technologies described above. The shared unit connects ports to the shared unit in a round-robin fashion using the auto-negotiation logic.

According to the MPEP 2143, three basic criteria must be met to establish a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Claim 1:

Neither Schultzrinne, Regnier, nor Patel, whether taken individually or in combination, teach or suggest all of the limitations found in claim 1. Neither Schultzrinne, Regnier, nor Patel, whether taken individually or in combination, teach or suggest a method for routing calls to a destination gateway to establish a communication session call in a telecommunications network between a source user agent and a destination user agent over a path supported at least in part by a circuit switched telephone network and an IP network. Nor do the cited references disclose, teach, or suggest an IP network that includes a plurality of ingress and destination gateways, at least one proxy server, and at least one redirect server. Schultzrinne relates exclusively to communications within the Internet. Regnier relates exclusively to circuit switched networks. Patel, which appears to have no relevance whatsoever, relates to interconnection devices employed in LANs.

Neither Schultzrinne, Regnier, nor Patel, whether taken individually or in combination, teach or suggest a method that includes the step of receiving a call setup request at the at least one proxy server from the source user agent, wherein the source user agent is included in a public switched telephone network and the call setup request identifies the destination user, as recited in claim 1. Neither Schultzrinne, Regnier, nor Patel, whether taken individually or in combination, teach or suggest a method that includes the step of proxying a call setup request by a proxy server to a destination gateway selected from routing information received from a redirect server, wherein the selected destination gateway can communicate with a public switched network that includes the destination user agent, as recited in claim 1. Neither Schultzrinne, Regnier, nor Patel, whether taken individually or in

combination, teach or suggest a method that includes the step of waiting for a response from the selected destination gateway upon proxying the call setup request, as recited in claim 1. Neither Schultzrinne, Regnier, nor Patel, whether taken individually or in combination, teach or suggest a method that includes the step of establishing a communication session using the selected destination gateway if the selected destination gateway responds within a predetermined period of time, as recited in claim 1. Finally, neither Schultzrinne, Regnier, nor Patel, whether taken individually or in combination, teach or suggest a method that includes the step of sending the call setup request to a succeeding destination gateway selected from routing information and reporting failure of the selected destination gateway to the redirect server, wherein the succeeding destination gateway can communicate with a public switched telephone network that includes the destination user agent, as recited in claim 1.

Even if the cited references include all of the claim limitations, which they do not, MPEP 2143 states that there must be a motivation to combine references. According to MPEP 2143.01, an examiner's proposed combination cannot render the cited prior art unsatisfactory for its intended purpose. Further, the MPEP also states that a proposed modification cannot change the principle of operation of a reference.

Schultzrinne teaches an Internet control architecture. Everyone of ordinary skill in the art knows that the Internet is based on packet switching. Regnier teaches a method for routing calls in a circuit switched network. The combination of Schultzrinne with Regnier renders both of these references unsatisfactory for their intended purpose. Clearly, it is impossible to employ a control scheme for a packet switched network in a circuit switched network without changing the principle of operation of at least one of the references. Likewise, it would be impossible to employ a routing control scheme for a circuit switched network in a packet switched network without changing the principle of operation of at least one of the references. The applicant finds it extremely difficult to comment on the examiner's use of the Patel reference. It has no apparent relevance to either Schultzrinne or Regnier, let alone the claimed invention. As described in detail above, the Patel reference discloses an auto-negotiation state machine that is employed in a LAN interconnection device. The examiner does not explain how or why such a device would be combined with Schultzrinne's Internet architecture or Regnier's circuit switched routing control method.

The proposition that one of ordinary skill in the art would look to combine Patel's auto-negotiation state machine with either Schultzrinne or Regnier is unbelievable.

Claims 2-15 are also allowable by virtue of their dependency on claim 1. For the above reasons, the applicant believes that claims 1-15 are patentable under 35 U.S.C. § 103(a). The applicant respectfully requests that the rejection of claims 1-15 under 35 U.S.C. § 103(a) be withdrawn.

Claim 19:

Neither Schultzrinne, Regnier, nor Patel, whether taken individually or in combination, teach or suggest all the limitations found in claim 19. Neither Schultzrinne, Regnier, nor Patel, whether taken individually or in combination, teach or suggest a method for detecting an available destination gateway from a plurality of destination gateways in an IP network for completing a communications session between a source user agent in a public switched telephone network, and a destination user agent in a public switched telephone network, wherein the source user agent provides a call setup request that identifies the destination user agent, as recited in claim 19. Neither Schultzrinne, Regnier, nor Patel, whether taken individually or in combination, teach or suggest a method that includes the step of transmitting a message to one of the plurality of destination gateways from a server to ascertain an availability status of that particular destination gateway, wherein the one destination gateway can communicate with the public switched telephone network that includes the destination user agent. Neither Schultzrinne, Regnier, nor Patel, whether taken individually or in combination, teach or suggest a method that includes the step of waiting for an acknowledge response from the one of the plurality of destination gateway for a predetermined period of time. Neither Schultzrinne, Regnier, nor Patel, whether taken individually or in combination, teach or suggest a method that includes the step of determining if one of the plurality of gateways is available if the acknowledge response is received within the predetermined period of time. Finally, neither Schultzrinne, Regnier, nor Patel, whether taken individually or in combination, teach or suggest a method that includes the step of transmitting the message to a succeeding gateway of the plurality of gateways, wherein the succeeding gateway can communicate with the public switched telephone network that includes the destination user agent.

MPEP 2143 states that there must be a motivation to combine references. According to MPEP 2143.01, the examiner's proposed combination cannot render the cited prior art unsatisfactory for its intended purpose. The MPEP also states that a proposed modification cannot change the principle of operation of a reference. As discussed above in connection with claim 1, the examiner's proposed combination of references not only renders the cited prior art unsatisfactory for its intended purpose, but it also changes the principles of operation for each of the cited references.

Claims 20-22 are also allowable by virtue of their dependency on claim 19. For the above reasons, the applicant believes that claims 19-22 are patentable under 35 U.S.C. § 103(a). The applicant respectfully requests that the rejection of claims 19-22 under 35 U.S.C. § 103(a) be withdrawn.

B. The Examiner has rejected claims 16-18 under 35 U.S.C. § 103(a) as being unpatentable for obviousness over Schultzrinne in view of Regnier. The rejection is respectfully traversed. The applicant believes that this rejection is improper because the Examiner has failed to make a prima facie case of obviousness.

Amended independent claim 16 of the present invention is directed to a system for allowing a call to be completed in a communication session between a calling party and a called party. The system includes a first telephony system that includes at least one source user agent (SUA) and a second telephony system that includes at least one destination user agent (DUA). An IP network is connected between the first and second telephony systems. A plurality of ingress gateways interface the IP network to the first telephony system. A plurality of egress gateways interface the IP network to the second telephony system. An IP telephony proxy server is provided for selecting one of the plurality of egress gateways for completing the call based on routing information received by the IP telephony proxy server. The IP telephony proxy server receives a call setup request from the source user agent that identifies the destination user agent. The system also includes an IP redirect server to provide the routing information to the IP telephony proxy server. A Network Management System, in communication with the IP telephony proxy server, receives and stores status changes of the destination gateways.

As discussed above, Schultzrinne is related to a control architecture for the Internet, whereas Regnier is related to call routing control in circuit switched networks.

Neither Schultzrinne nor Regnier, whether taken individually or in combination, teach or suggest all the limitations found in claim 16. Neither Schultzrinne nor Regnier, whether taken individually or in combination, teach or suggest a system that includes an IP network connected between a first telephony system and a second telephony system, as recited in claim 16 of the present invention. Neither Schultzrinne nor Regnier, whether taken individually or in combination, teach or suggest a system that includes a plurality of ingress gateways for interfacing the IP network to the first telephony network, as recited by claim 16. Neither Schultzrinne nor Regnier, whether taken individually or in combination, teach or suggest a system that includes a plurality of egress gateways for interfacing the IP network to the second telephony network, as recited by claim 16. Neither Schultzrinne nor Regnier, whether taken individually or in combination, teach or suggest a system that includes an IP telephony proxy server for selecting one of the plurality of egress gateways for completing the call based on routing information received by the IP telephony proxy server, wherein the IP telephony proxy server receives a call setup request from the source user agent that identifies the destination user agent, as recited by claim 16. Neither Schultzrinne nor Regnier, whether taken individually or in combination, teach or suggest a system that includes a Network Management System, in communication with an IP redirection server, for receiving and storing status changes of destination gateways, as recited in claim 16. The applicant notes that the service control point/network (SCP/NP) processor disclosed by Regnier identifies and tracks the availability of trunking circuits between service switching points (SSPs), and hence, has nothing whatsoever to do with IP networks.

As discussed above in connection with claim 1 and claim 19, MPEP 2143 states that there must be a motivation to combine references. According to MPEP 2143.01, the examiner's proposed combination cannot render the cited prior art unsatisfactory for its intended purpose. The MPEP also states that a proposed modification cannot change the principle of operation of a reference. As discussed above in connection with claim 1 and claim 19, the examiner's proposed combination of Schultzrinne and Regnier not only renders the cited prior art unsatisfactory for its intended purpose, but it also changes the principles of operation for each of the cited references since the teachings of Schultzrinne relate exclusively to the Internet (packet switched), whereas the teachings of Regnier relate exclusively to Signaling System No. 7 circuit switched networks.

Claims 17-18 are also allowable by virtue of their dependency on claim 16. For the above reasons, the applicant believes that claims 16-18 are patentable under 35 U.S.C. § 103(a). The applicant respectfully requests that the rejection of claims 16-18 under 35 U.S.C. § 103(a) be withdrawn.

C. The applicant notes that claims 23-28 were not rejected under 35 U.S.C. § 103(a). Applicant notes with appreciation that the Examiner has deemed the subject matter of claims 23-28 to be patentable.

4. Conclusion


Based upon the above remarks and papers of record, Applicant believes the pending claims of the above-captioned application are in allowable form and patentable over the prior art of record. Applicant respectfully requests reconsideration of the pending claims 1-28 and a prompt Notice of Allowance thereon.

Applicant believes that no extension of time is necessary to make this Response timely. Should Applicant be in error, Applicant respectfully requests that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Response timely, and hereby authorizes the Office to charge any necessary fee or surcharge with respect to said time extension to the deposit account of the undersigned firm of attorneys, Deposit Account 50-0289.

Please direct any questions or comments to Daniel P. Malley at (607) 256-7307.

Respectfully submitted,

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